FIG.1A

FIG.1B

FIG.2A

FIG.2B

FIG.2C

FIG.2D

FIG.2E

FIG.2F

FIG.2G

FIG.2H

FIG.3A

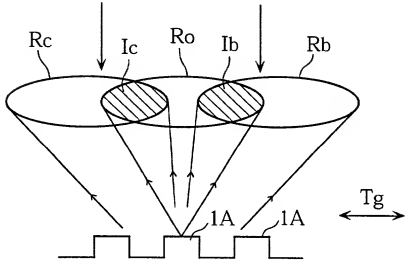

FIG.3B

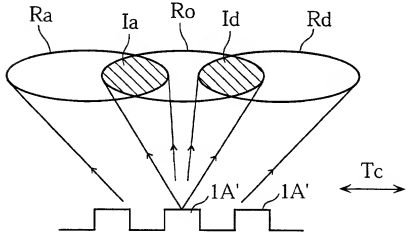

FIG.4

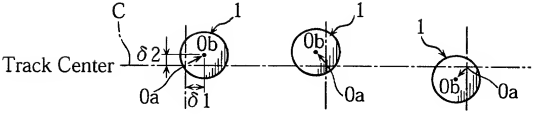

FIG.5

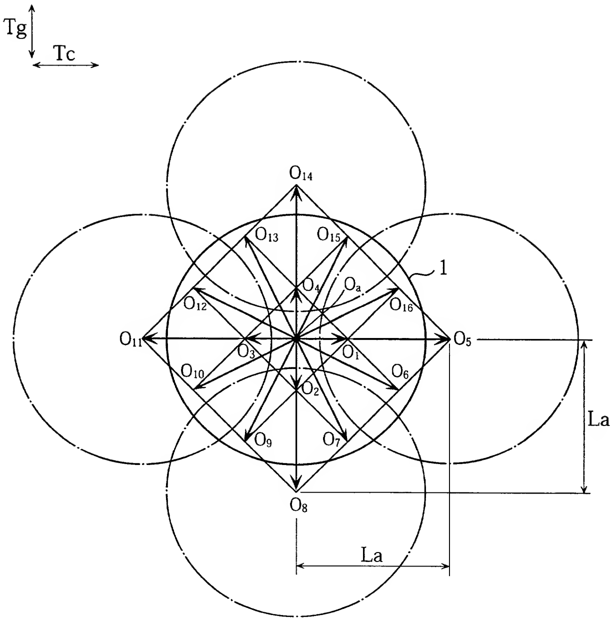
Tg
Tc
O14
O13
O15
1
O4
Oa
O12
O16
O11
O5
O3
O1
O10
O6
O2
La
O9
O7
O8
La

FIG.6

FIG.7

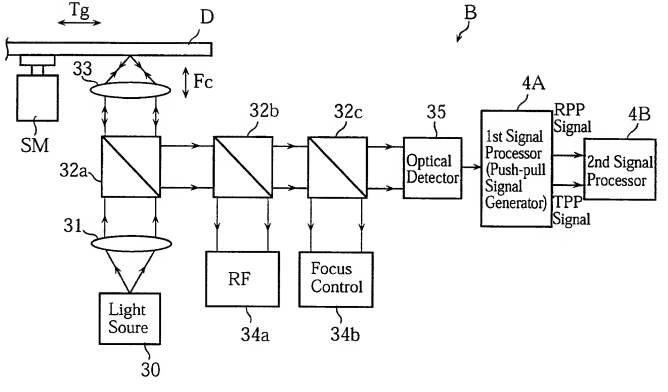
Tg
D
B
33
Fc
4A
32b
32c
35
RPP Signal
4B
SM
32a
Optical Detector
1st Signal Processor (Push-pull Signal Generator)
2nd Signal Processor
TPP Signal
31
RF
Focus Control
Light Soure
34a
34b
30

FIG.8

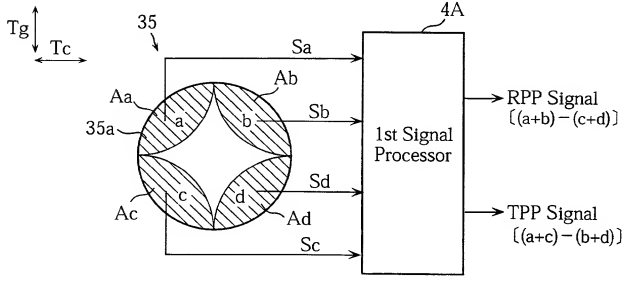
Tg
Tc
35
4A
Sa
Ab
Aa
Sb
35a
a
b
1st Signal Processor
RPP Signal
〔(a+b)−(c+d)〕
Sd
c
d
Ac
Ad
Sc
TPP Signal
〔(a+c)−(b+d)〕

FIG.9A

FIG.9B

FIG.10A

FIG.10B

FIG.11A

FIG.11B

FIG.12B

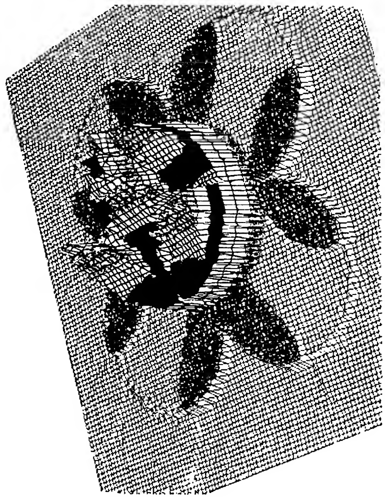

FIG.12A

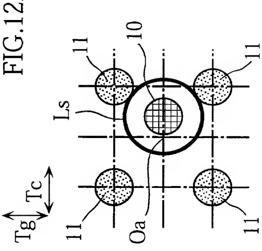

FIG.13A

FIG.13B

FIG.14A

FIG.14B

FIG.15

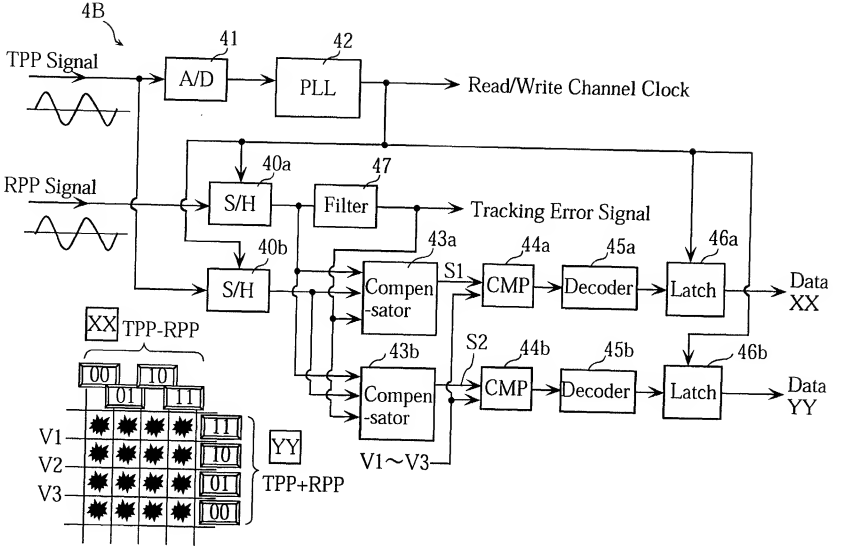

FIG.16A

FIG.16B

FIG.17

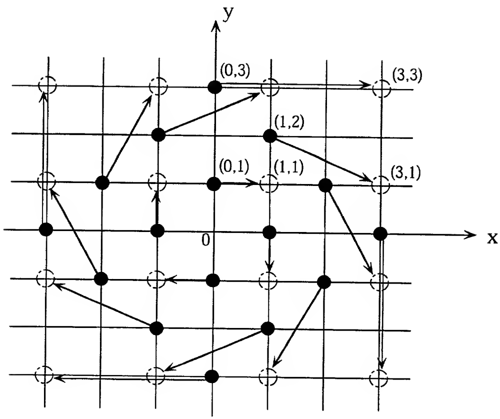

FIG.18

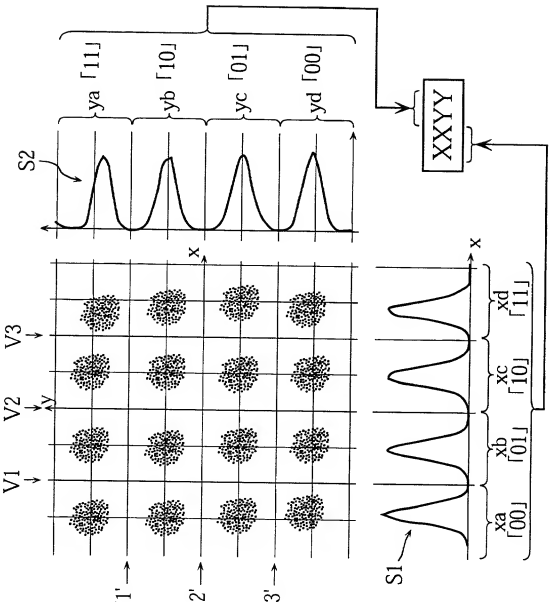

FIG.19

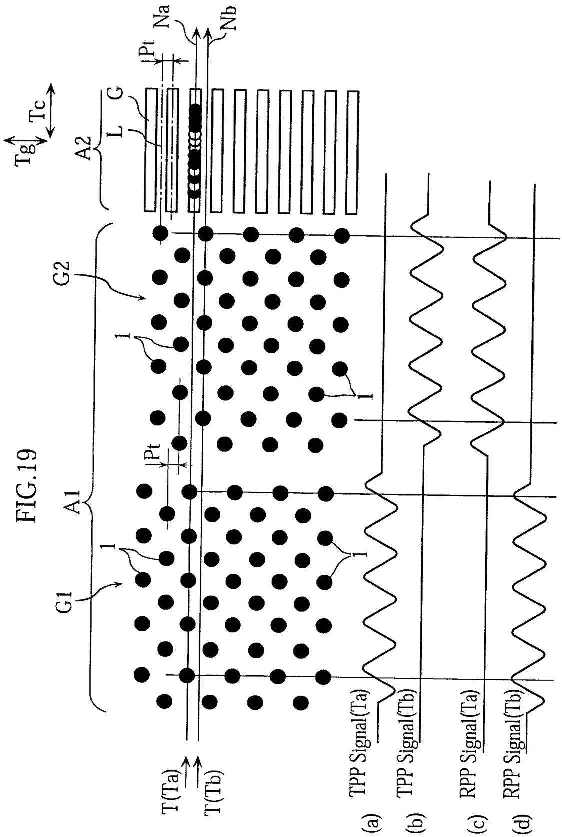
Tg
Tc
A2
L
G
Pt
Na
Nb
G2
1
A1
G1
T(Ta)
T(Tb)
(a) TPP Signal(Ta)
(b) TPP Signal(Tb)
(c) RPP Signal(Ta)
(d) RPP Signal(Tb)

FIG.20
PRIOR ART

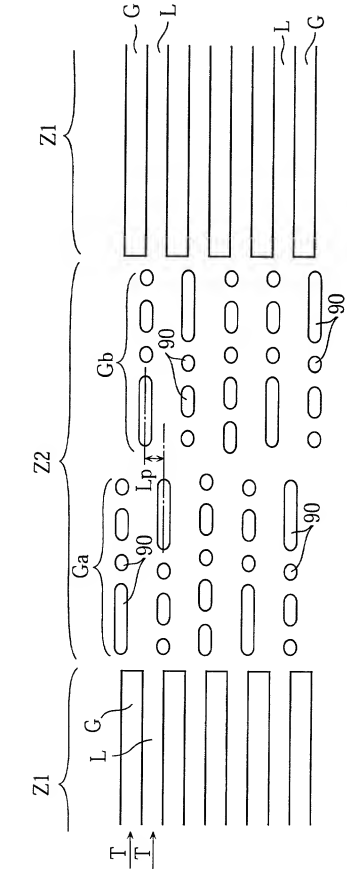

FIG.21
PRIOR ART